

***Bayesian Vector Autoregressive (BVAR) dalam Meramal Mata Uang Cina,
India, dan Indonesia Terhadap Mata Uang Amerika Serikat***

SKRIPSI

Diajukan Untuk Memenuhi Sebagian dari Syarat untuk Memperoleh
Gelar Sarjana Matematika



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India dan Indonesia Terhadap Mata Uang Amerika Serikat***

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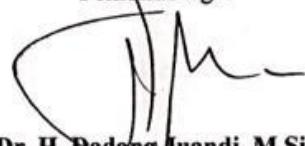
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Terhadap Dolar Amerika Serikat*

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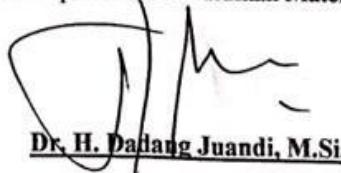


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ABSTRAK

Nilai tukar mata uang dapat digunakan untuk mengukur tingkat perekonomian suatu negara. Peramalan nilai tukar diperlukan agar investor dapat mengetahui tingkat perekonomian negara tujuan investasi di masa datang. Pada penelitian ini digunakan metode *Bayesian Vector Autoregressive* (BVAR) dalam memodelkan, melakukan peramalan, dan membandingkan hasil ramalan antara nilai tukar Rupee, Rupiah, dan Yuan terhadap Dolar Amerika Serikat dengan dua prior yang berbeda yaitu *Prior Litterman-Minnesota* dan *Prior Normal-Flat*. Tujuan dari penelitian ini adalah mendapatkan model, serta membandingkan hasil peramalan dengan metode BVAR dari masing-masing prior. *Bayesian Vector Autoregressive* (BVAR) berdasarkan penelitian sebelumnya, terbukti mampu memberikan hasil peramalan yang lebih unggul. Hasil peramalan dari masing-masing prior menyatakan bahwa baik *Prior Litterman-Minnesota* dan *Prior Normal-Flat* menghasilkan peramalan yang akurat berdasarkan nilai *Mean Absolute Percentage Error* (MAPE) yang kecil. Kemudian, setelah dibandingkan, pada kasus peramalan nilai tukar Rupee, Rupiah, dan Yuan terhadap Dolar Amerika Serikat, *Prior Litterman-Minnesota* memiliki nilai MAPE lebih kecil yang artinya hasilnya lebih akurat.

Kata Kunci : Nilai Tukar, BVAR, Litterman-Minnesota, Normal-Flat, MAPE

ABSTRACT

Currency exchange rates can be used to measure the level of a country's economy. Forecasting the exchange rate is needed so that investors would know the level of the economy of the investment destination in the future. In this study the Bayesian Vector Autoregressive (BVAR) method is used in modeling, forecasting, and comparing the forecast results between Rupees, Rupiah and Yuan exchange rates against the United States Dollar with two different priors namely Prior Litterman-Minnesota and Prior Normal-Flat. The purpose of this study is to obtain a model, and compare the forecasting results with the BVAR method from each prior. Bayesian Vector Autoregressive (BVAR), based on previous research, is proven to be able to provide superior forecasting results. Forecasting results from each prior state that both Prior Litterman-Minnesota and Prior Normal-Flat produce accurate forecasting based on a small Mean Absolute Percentage Error (MAPE) value. Then, after comparison, in the case of forecasting the exchange rate of Rupees, Rupiah and Yuan against the US Dollar, the Prior Litterman-Minnesota has a smaller MAPE value which means the results are more accurate.

Key words : *exchange rates, BVAR, Litterman-Minnesota, Normal-Flat, MAPE*

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